UNITED STATES DISTRICT COURT FOR THE DISTRICT OF NEVADA

ORACLE USA, INC., a Colorado corporation; ORACLE AMERICA, INC., a Delaware corporation; and ORACLE INTERNATIONAL CORPORATION, a California corporation,

Plaintiffs,

v.

RIMINI STREET, INC., a Nevada corporation; and SETH RAVIN, an individual,

Defendants.

Case No. 2:10-cv-0106-LRH-VCF

DECLARATION OF THOMAS D. VANDER VEEN, PH.D.

May 25, 2018

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I. Introduction

I, Thomas D. Vander Veen, hereby state and declare as follows:

A. Qualifications

- I am a Managing Director at Epsilon Economics, an economic consulting firm. I specialize
 in the application of economics to intellectual property, international trade, and complex
 commercial disputes.
- 2. I have a Ph.D. in economics from Brown University. As a consultant or expert witness, I have performed economic analyses in a variety of commercial litigation engagements, including matters involving patent infringement, copyright infringement, misappropriation of trade secrets, trademark infringement, and breach of contract claims. I have performed economic analyses in a wide range of intellectual property matters, including those where the identification of attorneys' fees and costs as well as the determination of prejudgment interest was at issue.
- 3. I have served as an economic expert in matters before the U.S. courts and the U.S. International Trade Commission. I have also provided business consulting services related to intellectual property valuation and licensing and to the valuation of intra-company transactions. I co-developed a course and taught advanced courses on intellectual property valuation at the Licensing Executives Society, the leading professional organization for intellectual property valuation and licensing.
- 4. I served as an economist on the staff of Commissioner Koplan, the former Chairman and Commissioner of the U.S. International Trade Commission. In this role, I analyzed financial, trade, and industry information, and assisted Commissioner Koplan in reaching his determinations in international trade litigation matters before the Commission. Prior to my service at the U.S. International Trade Commission, I was an assistant professor of economics at Skidmore College. I am a member of the American Economic Association, the Licensing Executives Society, and I am an associate member of the International Trade

Commission Trial Lawyers Association. I also served as a member of the International Trade Commission Committee of the Intellectual Property Owners Association.

5. A copy of my curriculum vitae is attached as Tab 1. Epsilon Economics bills \$675 per hour for my work on this matter. No part of any compensation to Epsilon Economics for work in this matter is affected by the results of this case. I also have been assisted by my team at Epsilon Economics.

B. Assignment

- 6. I have been retained by Gibson, Dunn & Crutcher LLP on behalf of defendant Rimini Street, Inc. ("Rimini" or "Defendant"). I have been asked to provide economic analysis relating to fees and costs for legal services that the district court awarded to plaintiffs Oracle International Corporation and Oracle America, Inc. (together, "Oracle" or "Plaintiff") that were rendered before and after the August 24, 2015 offer of judgment, as well as relating to certain adjustments to those fees based on reductions proposed by Rimini and/or Professor Dennis Kennedy. I have also been asked to provide economic analyses relating to the amount of prejudgment interest the district court awarded to Oracle that accrued before and after the August 24, 2015 offer of judgment. Finally, I have been asked to calculate fees and costs for certain legal services incurred by Seth Ravin in connection with this litigation based on hourly billing rates that have been identified as reasonable by Professor Kennedy.
- 7. In conducting my analysis, members of my team and I have reviewed various documents produced in this litigation, including pleadings, economic and financial information, as well as publicly available information.

II. SUMMARY OF OPINIONS

8. Based on my education and experience, the facts of this case, and my analysis, I have calculated the amount of attorneys' fees, taxable costs, non-taxable costs, and prejudgment interest to be as follows.

	Standard Hourly Rates Through August 24, 2015	Reduced Hourly Rates Through August 24, 2015
Copyright Damages	\$35,600,000.00	\$35,600,000.00
Attorneys' Fees		
Total Award		
Range Based on Offset for Claims against Seth Ravin and Degrees of Success		
Taxable Costs		
Non-taxable Costs		
Prejudgment Interest		

III. CALCULATION OF ATTORNEYS' FEES AND COSTS

I have been asked to determine the amount of attorneys' fees, taxable costs, and non-taxable costs that Oracle incurred after rejecting Rimini's August 24, 2015 offer of judgment considering Oracle's more limited degree of success. I discuss my findings below.

A. Calculation of Attorneys' Fees

10. Oracle argued that the court should award \$35,627,807.99 in attorneys' fees in the district court.¹ In light of the district court's findings relating to Oracle's claims, the court awarded attorneys' fees, but found that the legal fees that Oracle requested included improper block billing entries and other inconsistencies. As a result, the district court applied a 20% reduction of the requested fees, resulting in an award of \$28,502,246.40 (hereinafter, this adjusted award is referred to as "Attorneys' Fees Award").² The Ninth Circuit Court of Appeals reversed the district court's judgment with respect to Oracle's claims under the

Oracle USA, Inc. v. Rimini Street, Inc., 209 F. Supp. 3d 1200, 1216 (D. Nev. 2016).

² Oracle USA, Inc. v. Rimini Street, Inc., 209 F. Supp. 3d 1200, 1216-1218 (D. Nev. 2016).

California Comprehensive Data Access and Fraud Act ("CCDAFA"), the Nevada Computer Crimes Law ("NCCL"), California's Unfair Competition Law ("UCL"), and all liability against Seth Ravin, and vacated the Attorneys' Fees Award and remanded for reconsideration in light of Oracle's more limited degree of success.³

1. Offset for Claims Against Mr. Ravin

11. As an initial matter, I understand that Defendants argue the Attorneys' Fees Award should be reduced to account for the fact that Seth Ravin is a prevailing party on all claims alleged against him. I understand that Defendants have proposed two options for offsetting the award to account for Mr. Ravin's prevailing party status: (i) reduce the amount of fees Oracle is seeking by the amount Mr. Ravin incurred litigating *Rimini I*, applying an adjusted hourly rate and a 20% reduction to be consistent with Professor Kennedy's opinion on a reasonable fee award, or (ii) simply reduce Oracle's requested amount by half to account for the fact that it prevailed against only one of the two defendants it sued. Those two options, as well as a third option of applying no offset at all, are summarized in the following chart:

	Reduction of Fees Incurred by Mr. Ravin	Reduction of 50% of Oracle Fees	No Offset
Awarded Attorneys' Fees	\$28,502,246.40	\$28,502,246.40	\$28,502,246.40
Offset		\$14,251,123.20	\$0.00
Total		\$14,251,123.20	\$28,502,246.40

Offset Option 1: Offset for Claims Against Mr. Ravin Based on Fees Incurred by Mr.
Ravin at Reduced Rates

12. Defendants incurred attorneys' fees of in litigating *Rimini I.*⁴ I understand that in determining the amount to offset against Oracle's award, Rimini has conservatively

Oracle USA, Inc. v. Rimini Street, Inc., 879 F.3d 948, 961-66 (9th Cir. 2018).

The attorneys' fees in the amount of \$13,848,383.10 are after reducing gross fees by discounts and adjustments. Declaration of Julie Sullivan, May 25, 2018; see also Tab 3c.

decided to use adjusted hourly rates that reflect what Professor Kennedy opines is a reasonable hourly rate. Those rates, as determined by Professor Kennedy, are as follows:

Reasonable Hourly Billing Rates				
	\$800.00	Document Clerk	\$150.00	
	\$550.00	Lit. Support	\$150.00	
Partner	\$475.00	Paralegal	\$150.00	
Of Counsel	\$475.00	Project Assistant	\$150.00	
Associate	\$300.00	Staff Attorney	\$112.50	
Analyst	\$150.00	Summer Clerk	\$150.00	
Database Editor	\$150.00	Temp Analyst	\$112.50	

13.	Adjusting the amount of fees incurred by Defendants using these hourly rates, Defendants		
	attorneys' fees are reduced to for Shook Hardy & Baco	on,	for
	Gibson Dunn, for Lewis Roca, and for Green	berg Traurig. ⁵	The
	total amount of Defendants' attorneys' fees for these four firms using	the adjusted hor	ırly
	rates is .6		

- 14. Professor Kennedy opines that it is reasonable to attribute to Mr. Ravin 50% of the adjusted total amount incurred by Defendants. Thus, the total amount incurred by Mr. Ravin in litigating *Rimini I*, at the adjusted hourly rates, was
- 15. I further understand that Rimini decided to conservatively apply a 20% reduction to be consistent with the district court's order reducing Oracle's award by 20% to account for block billing and other billing practices. Applying that 20% reduction, I calculate that fees attributable to Mr. Ravin were ______.
- 16. Taking that amount, and offsetting it against the Attorneys' Fees Award of \$28,502,246.40 results in a reduced award to Oracle of See Tab 3a for additional detail

⁵ See Tab 3c.

⁶ See Tab 3a.

Declaration of Dennis Kennedy, May 25, 2018.

regarding the offset of the Attorneys' Fees Award for fees incurred by Mr. Ravin at adjusted rates.

Offset Option 2: 50% Offset Because Oracle Prevailed Against Only One of Two Defendants

- 17. Alternatively, I understand that Rimini argues the award should be offset by 50% because Oracle prevailed against only one of two defendants it sued. Applying an offset of 50% to the fee award results in a \$14,251,123.20 reduction.⁸
- 18. See Tabs 3a and 3b for additional detail regarding the offset of the attorneys' fees award for Oracle's limited success in claims against Mr. Ravin.

2. <u>Degree of Success</u>

19. I understand that Defendants also argue any fee award should be reduced to account for Oracle's limited degree of success against Rimini. While I considered analyzing the attorneys' time entries to isolate the fees associated with Oracle's successful claims, I was unable to determine the fees for Oracle's successful claims with any degree of certainty since many of the time entries are block-billed and vague. I understand that courts often apply an adjustment across-the-board to account for degrees of success. I have considered a variety of factors for purposes of estimating Oracle's degree of success, as discussed below.

Degree of Success Option 1: Attribute Fees Pro Rata to 12 Claims

20. I understand that courts consider both the number of claims alleged relative to the number of claims proven, as well as the amount of damages awarded relative to the amount of damages sought, since it is unreasonable to require defendants to pay attorneys' fees to a plaintiff for claims on which the defendant prevailed. In this case, after the Ninth Circuit reversed the district court's judgment with respect to Oracle's claims under the CCDAFA, the NCCL, and UCL, Oracle can only be considered successful on only one out of twelve

Declaration of Dennis Kennedy, May 25, 2018.

⁸ See Tab 3b.

claims. When considering the number of claims it won relative to those attempted, Oracle obtained an 8.3% success rate in this case. 10

<u>Degree of Success Option 2: Attribute Fees Based on Total Damages Awarded vs. Total</u>

<u>Damages Sought</u>

21. I also understand that courts consider the amount of damages awarded as compared to the amount sought when determining the degree of success. In this case, the jury award, after remand from the Ninth Circuit, was \$35.6 million. Oracle sought \$245.9 million in non-duplicative damages related to the three claims presented to the jury. Thus, the damages awarded compared with the amount of damages sought indicates a 14.5% degree of success. degree of success.

<u>Degree of Success Option 3: Attribute Fees Based on Damages Awarded vs. Damages</u> <u>Sought for Copyright Infringement Claims</u>

- 22. As an alternative to a comparison of total damages awarded and total damages sought, I have also considered the awarded damages of \$35.6 million relative to the \$128.3 million in damages sought only for the copyright infringement claims. ¹⁴ This comparison, despite ignoring the fact that Oracle was entirely unsuccessful on all other claims, indicates that Oracle obtained only a 27.7% degree of success. ¹⁵
- 23. I have applied the degrees of success discussed above to the Awarded Attorneys' Fees after the application of the offsets for claims against Mr. Ravin. The following table illustrates the application of these three options after applying the offset reduction accounting for fees attributable to Mr. Ravin:

^{8.3% = 1 / 12.}

Oracle USA, Inc. v. Rimini Street, Inc., 209 F. Supp. 3d 1200, 1206 (D. Nev. 2016); Oracle USA, Inc. v. Rimini Street, Inc., 879 F.3d 948, 962–63 & n.7 (9th Cir. 2018).

¹² PTX_6006.

 $^{14.5\% = \$35.6 \}text{ million} / \$245.9 \text{ million}.$

¹⁴ PTX 6006.

 $^{27.7\% = \$35.6 \}text{ million} / \$128.3 \text{ million}.$

	Degree of Success 1: Pro Rata to 12 Claims	Degree of Success 2: Based on Damages Awarded vs. Sought	Degree of Success 3: Based on Damages Awarded vs. Sought for Copyright Infringement
Adjusted Amount After Applying the Offset to Account for Mr. Ravin's Status as a Prevailing Party			
Percentage to Account for Degree of Success	8.3%	14.5%	27.7%
Total			

24. Alternatively, the following table illustrates the application of these three options after applying the 50% offset reduction discussed above.

	Degree of Success 1: Pro Rata to 12 Claims	Degree of Success 2: Based on Damages Awarded vs. Sought	Degree of Success 3: Based on Damages Awarded vs. Sought for Copyright Infringement
Adjusted Amount After Applying the 50% Offset	\$14,251,123.20	\$14,251,123.20	\$14,251,123.20
Percentage to Account for Degree of Success	8.3%	14.5%	27.7%
Total	\$1,187,593.60	\$2,063,196.36	\$3,954,325.69

25. Further detail regarding the application of the degree of success factors is presented in Tabs 4a-4c. A summary of attorneys' fees that should be awarded after application of (1) an offset for Mr. Ravin's status as a prevailing party, and then (2) Oracle's limited degree of success against Rimini is presented in the table below.

Offset	Degree of Success 1: Pro Rata to 12 Claims	Degree of Success 2: Based on Damages Awarded vs. Sought	Degree of Success 3: Based on Damages Awarded vs. Sought for Copyright Infringement
Offset Based on Fees Attributable to Mr. Ravin			
Offset Based on 50% of Oracle's Fees	\$1,187,593.60	\$2,063,196.36	\$3,954,325.69
No Offset	\$2,375,187.20	\$4,126,392.73	\$7,908,651.38

3. Offer of Judgment

- 26. I understand that Rimini made Oracle a \$100 million offer of judgment accompanied by injunctive relief on August 24, 2015, but Oracle did not accept that offer. I calculated the amount of attorneys' fees incurred by Oracle before and after the date of the offer. I also calculated the amount of attorneys' fees before and after the date of the offer after the application of the above adjustments, taking into account (i) Mr. Ravin's status as a prevailing party, and (ii) Oracle's limited success against Rimini.
- 27. The amount of attorneys' fees that are reduced in order to take into account the offer of judgment depends on which of the above offset and degree-of-success options are selected. Tabs 5a-5d reflect the various scenarios depending on which options are selected. A summary of those options is set forth in the following table. The amounts in this table reflect the total amount of attorneys' fees that would be awarded after the offset, degree of success, and Rule 68 offer of judgment reductions are made.



28. As an example to illustrate the point, the number was calculated as follows. First, starting with the district court's prior award of \$28,502,246.40 in fees, that number is reduced by a 50% offset to take into account Mr. Ravin's status as a prevailing party, resulting in an award of \$14,251,123.20.¹⁷ Second, that number is further reduced to take into account the fact that Oracle prevailed on only one out of twelve claims against Rimini,

¹⁶ See Tab 5a.

¹⁷ See Tab 3b.

resulting in an award of \$1,187,593.60.¹⁸ Third, of that amount, was incurred before the August 24, 2015 offer of judgment.¹⁹

4. Reduced Billing Rates

29. I understand Rimini has also requested that the court further reduce Oracle's award of attorneys' fees because Oracle is seeking hourly rates that exceed reasonable local rates. As a result, I have been asked to calculate an adjusted amount of attorneys' fees taking into account the rates Professor Kennedy opines to be reasonable rates. Oracle sought attorneys' fees paid to Morgan Lewis and Boies Schiller in the amounts of and respectively, which were calculated by multiplying the number of billable hours by the attorneys' hourly rates. I have calculated the amount of attorneys' fees for Morgan Lewis and Boies Schiller using the rates identified in the table below by title and for select individuals. Professor Rennedy opines to be reasonable rates.

See Tab 4b; $$1,187,593.60 = $14,251,123.20 \times (1/12)$.

¹⁹ See Tab 5c.

Declaration of Thomas S. Hixson in Support of Oracle's Reply in Support of Its Motion for Costs and Attorneys' Fees, April 4, 2016, Exhibit A.

Affidavit of Dennis L. Kennedy, March 8, 2016, paragraphs 12.1.1 - 12.1.5, 27.8.1 - 27.8.10, 27.3, and footnote 21. According to Professor Kennedy, the median hourly rate for partners and attorneys with the title Of Counsel are approximately the same. Therefore, I have considered the reasonable hourly rate for attorneys with the title "Of Counsel" to be the same as the reasonable hourly rate for partners.

Reasonable Hourly Rates				
Morgan Lew	ris	Boies Schille	r	
	\$800.00		\$800.00	
	\$550.00		\$550.00	
Partner	\$475.00	Chairman	\$800.00	
Counsel	\$475.00	Partner	\$475.00	
Associate	\$300.00	Associate	\$300.00	
Librarian	\$150.00	Paralegal/Other Staff	\$150.00	
Litigation Specialist	\$150.00			
Paralegal Manager	\$150.00			
Paralegal	\$150.00			
Research Specialist	\$150.00			
Temp Paralegal	\$150.00			
Contract Attorney	\$112.50			

30. Using the hourly rates identified above, the amount of fees sought would be reduced to for Morgan Lewis and for Boies Schiller. Using these reduced attorneys' fees as a fourth step in reducing an award of fees to Oracle (after applying the offset, degree of success reduction, and Rule 68 reduction), I have calculated the reduction, which is presented in Tab 13.²³

B. Calculation of Taxable Costs

31. I understand that Rimini is also asking the court to reduce any award to Oracle by the amount of taxable costs incurred after the Rule 68 offer of judgment. As shown in Tab 5a, Oracle incurred in taxable costs after August 24, 2015.

C. Calculation of Non-taxable Costs

32. I understand that Rimini is also asking the court to reduce any award to Oracle by the amount of non-taxable costs incurred after the Rule 68 offer of judgment. Oracle claimed

²² See Tabs 8a and 8b.

See Tabs 9 - 13 for additional details regarding my analysis of attorneys' fees using reasonable hourly rates for Morgan Lewis and Boies Schiller.

that the court should award it in non-taxable costs.²⁴ The district court found that an overall reduction of 25% of almost all non-taxable costs was warranted, but reduced the costs of Elizabeth Dean of TMF by 50%.²⁵ Based on these reductions, the district court awarded non-taxable costs of a with attorneys' fees and taxable costs, I have evaluated the amount of non-taxable costs awarded before and after the date of the offer of judgment. As shown in Tab 5a, Oracle incurred in non-taxable costs after August 24, 2015.

IV. THE TOTAL AMOUNT OF THE FINAL JUDGMENT

- 33. I understand that in determining the amount of the final judgment for purposes of comparing the final judgment to Rimini's offer of judgment, Rimini argues that only prejudgment interest accrued up to the date of the final judgment should be considered. Thus, I calculated the amount of prejudgment interest that accrued on the jury's copyright infringement award through the August 24, 2015 offer of judgment, as well as the amount accrued after that date. I understand that the district court awarded \$22,491,636.16 in prejudgment interest on the copyright infringement award was computed by the court based on the weekly average one-year constant maturity Treasury yield (5.07%) using the rate as of October 29, 2006. ²⁸
- 34. I understand that Rimini made Oracle an offer of judgment for \$100 million plus injunctive relief on August 24, 2015, but that Oracle did not accept the offer. The amount of prejudgment interest awarded to Oracle through the date of the August 24, 2015 offer is \$19,472,349.98 and the amount of prejudgment interest after that date is \$3,019,286.18, as shown in Tab 6.
- 35. The value of the final judgment will depend on which of the above offset and degree of success options are selected to reduce Oracle's attorneys' fees award. Tab 7 and the

²⁴ Oracle USA, Inc. v. Rimini Street, Inc., 209 F. Supp. 3d 1200, 1218 (D. Nev. 2016).

²⁵ Oracle USA, Inc. v. Rimini Street, Inc., 209 F. Supp. 3d 1200, 1218 (D. Nev. 2016).

²⁶ Oracle USA, Inc. v. Rimini Street, Inc., 209 F. Supp. 3d 1200, 1219 (D. Nev. 2016).

²⁷ See Oracle USA, Inc. v. Rimini Street, Inc., 879 F.3d 948, 963 (9th Cir. 2018).

Oracle USA, Inc. v. Rimini Street, Inc., 209 F. Supp. 3d 1200, 1212 (D. Nev. 2016); see also Oracle USA, Inc. v. Rimini Street, Inc., 879 F.3d 948, 963 (9th Cir. 2018).

following chart summarize what the final judgment will be depending on which options are selected.

Scenario	Description	Final Judgment	Tab
1	Copyright infringement damages + total awarded attorneys' fees through August 24, 2015 + total awarded taxable costs through August 24, 2015 + total awarded non-taxable costs through August 24, 2015 + total awarded prejudgment interest through August 24, 2015		7
2	Copyright infringement damages + Ravin fees offset, degree of success 1 through August 24, 2015 + total awarded taxable costs through August 24, 2015 + total awarded non-taxable costs through August 24, 2015 + total awarded prejudgment interest through August 24, 2015		7
3	Copyright infringement damages + Ravin fees offset, degree of success 2 through August 24, 2015 + total awarded taxable costs through August 24, 2015 + total awarded non-taxable costs through August 24, 2015 + total awarded prejudgment interest through August 24, 2015		7
4	Copyright infringement damages + Ravin fees offset, degree of success 3 through August 24, 2015 + total awarded taxable costs through August 24, 2015 + total awarded non-taxable costs through August 24, 2015 + total awarded prejudgment interest through August 24, 2015		7
5	Copyright infringement damages + 50% offset, degree of success 1 through August 24, 2015 + total awarded taxable costs through August 24, 2015 + total awarded non-taxable costs through August 24, 2015 + total awarded prejudgment interest through August 24, 2015	_	7
6	Copyright infringement damages + 50% offset, degree of success 2 through August 24, 2015 + total awarded taxable costs through August 24, 2015 + total awarded non-taxable costs through August 24, 2015 + total awarded prejudgment interest through August 24, 2015	_	7
7	Copyright infringement damages + 50% offset, degree of success 3 through August 24, 2015 + total awarded taxable costs through August 24, 2015 + total awarded non-taxable costs through August 24, 2015 + total awarded prejudgment interest through August 24, 2015		7
8	Copyright infringement damages + no offset, degree of success 1 through August 24, 2015 + total awarded taxable costs through August 24, 2015 + total awarded non-taxable costs through August 24, 2015 + total awarded prejudgment interest through August 24, 2015		7

Scenario	Description	Final Judgment	Tab
9	Copyright infringement damages + no offset, degree of success 2 through August 24, 2015 + total awarded taxable costs through August 24, 2015 + total awarded non-taxable costs through August 24, 2015 + total awarded prejudgment interest through August 24, 2015		7
10	Copyright infringement damages + no offset, degree of success 3 through August 24, 2015 + total awarded taxable costs through August 24, 2015 + total awarded non-taxable costs through August 24, 2015 + total awarded prejudgment interest through August 24, 2015	_	7
11	Copyright infringement damages + total awarded attorneys' fees through August 24, 2015 + total awarded taxable costs through August 24, 2015 + total awarded non-taxable costs through August 24, 2015 + total awarded prejudgment interest	_	7
12	Copyright infringement damages + total awarded attorneys' fees at lower rates through August 24, 2015 + total awarded taxable costs through August 24, 2015 + total awarded non-taxable costs through August 24, 2015 + total awarded prejudgment interest through August 24, 2015	_	13
13	Copyright infringement damages + Ravin fees offset at lower rates, degree of success 1 through August 24, 2015 + total awarded taxable costs through August 24, 2015 + total awarded non-taxable costs through August 24, 2015 + total awarded prejudgment interest through August 24, 2015		13
14	Copyright infringement damages + Ravin fees offset at lower rates, degree of success 2 through August 24, 2015 + total awarded taxable costs through August 24, 2015 + total awarded non-taxable costs through August 24, 2015 + total awarded prejudgment interest through August 24, 2015		13
15	Copyright infringement damages + Ravin fees offset at lower rates, degree of success 3 through August 24, 2015 + total awarded taxable costs through August 24, 2015 + total awarded non-taxable costs through August 24, 2015 + total awarded prejudgment interest through August 24, 2015		13
16	Copyright infringement damages + 50% offset at lower rates, degree of success 1 through August 24, 2015 + total awarded taxable costs through August 24, 2015 + total awarded non-taxable costs through August 24, 2015 + total awarded prejudgment interest through August 24, 2015		13
17	Copyright infringement damages + 50% offset at lower rates, degree of success 2 through August 24, 2015 + total awarded taxable costs through August 24, 2015 + total awarded non-taxable costs through August 24, 2015 + total awarded prejudgment interest through August 24, 2015		13

Scenario	Description	Final Judgment	Tab
18	Copyright infringement damages + 50% offset at lower rates, degree of success 3 through August 24, 2015 + total awarded taxable costs through August 24, 2015 + total awarded non-taxable costs through August 24, 2015 + total awarded prejudgment interest through August 24, 2015	_	13
19	Copyright infringement damages + no offset at lower rates, degree of success 1 through August 24, 2015 + total awarded taxable costs through August 24, 2015 + total awarded non-taxable costs through August 24, 2015 + total awarded prejudgment interest through August 24, 2015	_	13
20	Copyright infringement damages + no offset at lower rates, degree of success 2 through August 24, 2015 + total awarded taxable costs through August 24, 2015 + total awarded non-taxable costs through August 24, 2015 + total awarded prejudgment interest through August 24, 2015		13
21	Copyright infringement damages + no offset at lower rates, degree of success 3 through August 24, 2015 + total awarded taxable costs through August 24, 2015 + total awarded non-taxable costs through August 24, 2015 + total awarded prejudgment interest through August 24, 2015		13

36. I declare under penalty of perjury under the laws of the United States and the State of Nevada that the foregoing is true and correct.

Thomas D. Vander Veen, Ph.D. Managing Director, Epsilon Economics

May 25, 2018

Tab 1



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Summary

Thomas Vander Veen specializes in the application of economics to intellectual property, international trade, and complex commercial disputes. Dr. Vander Veen has served as an economic expert in U.S. Courts, state courts and before the U.S. International Trade Commission.

His expertise includes valuation of intellectual property; evaluation of economic damages related to patent, copyright and trademark infringement, false advertising, breach of contract, and theft of trade secrets; and economic analysis in section 337 intellectual property matters before the U.S. International Trade Commission. Dr. Vander Veen's analysis of economic damages has included the development and analysis of consumer surveys. His intellectual property experience also includes the evaluation of commercial success of patented products, including in ANDA actions. He has studied market structure, competition, and performance of numerous pharmaceutical products, including pricing, marketing and promotion, and regulatory approval. He has performed economic analysis in numerous industries, including medical devices, pharmaceuticals, consumer retail products, consumer electronic devices, semiconductors, software and automotive products.

Dr. Vander Veen served as the principal economic advisor to a Commissioner, and subsequently the Chairman, of the U.S. International Trade Commission. He taught economics and finance at Northwestern University and economics at Skidmore College. He serves on the Board of Directors of the Chicago Youth Centers and on the board of the Lawyers for the Creative Arts. He earned his Ph.D. in economics from Brown University.

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Education

- Ph.D. (Economics), Brown University, 1998
- M.A. (Economics), Brown University, 1992
- B.A. (Economics and Mathematics), Calvin College, 1990

Professional and Academic Experience

- Epsilon Economics
 Managing Director and President, 2015 present
- Northwestern University McCormick School of Engineering and Applied Science Adjunct Lecturer, 2016
- Navigant Economics
 Managing Director and Principal, 2013 2015
 Director and Principal, 2010 2013
- LECG, LLC Senior Managing Economist, 2006 – 2010
- Wheaton College Adjunct Instructor of Economics – 2009
- Charles River Associates, Inc. / CRA International, Inc. / InteCap, Inc. Associate Principal, 2005 – 2006 Associate, 2003 – 2005
- U.S. International Trade Commission
 Economist and Advisor to Commissioner Stephen Koplan, 1999 2003
- Skidmore College Assistant Professor of Economics, 1997 – 1999

Professional Affiliations

- American Economic Association
- Licensing Executives Society
- International Trade Commission Trial Lawyers Association (Associate Member)

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Expert Testimony

1. Certain Automated Teller Machines, ATM Modules, Components Thereof, and Products Containing the Same

Nautilus Hyosung, Inc., et al. v. Diebold Nixdorf, Incorporated, et al.

U.S. International Trade Commission

Investigation No. 337-TA-989 (Enforcement Proceeding)

Patent Infringement

2. Certain Electrochemical Glucose Monitoring Systems and Components Thereof Dexcom, Inc. v. **AgaMatrix, Inc.**

U.S. International Trade Commission

Investigation No. 337-TA-1075

Patent Infringement

3. Certain Magnetic Data Storage Tapes and Cartridges Containing the Same Fujifilm Corporation, et al v. Sony Corporation, et al.

U.S. International Trade Commission

Investigation No. 337-TA-1076

Patent Infringement

4. Certain Solid State Storage Drives, Stacked Electronics Components, and Products Containing Same

BiTMICRO, LLC v. SK hynix Inc., Samsung Semiconductor, Inc. et al.

U.S. International Trade Commission

Investigation No. 337-TA-1097

Patent Infringement

5. Certain Robotic Vacuum Cleaning Devices and Components Thereof iRobot Corporation v. Bissell Homecare, Inc., Hoover, Inc., et al.

U.S. International Trade Commission

Investigation No. 337-TA-1057

Patent Infringement

6. Certain Magnetic Tape Cartridges and Components Thereof

Sony Corporation, et al. v. Fujifilm Corporation, et al.

U.S. International Trade Commission

Investigation No. 337-TA-1058

Patent Infringement

7. Certain Semiconductor Devices and Consumer Audiovisual Products Containing Same Broadcom Corporation v. MediaTek Inc., MediaTek USA Inc. and MStar Semiconductor Inc.

U.S. International Trade Commission Investigation No. 337-TA-1047

Patent Infringement

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8. Certain Digital Cable and Satellite Products, Set-Top Boxes, Gateways, and Components Thereof

Sony Corporation, et al. v. ARRIS International plc, Pace Americas LLC, et al.

U.S. International Trade Commission

Investigation No. 337-TA-1049

Patent Infringement

9. Certain Graphics Systems, Components Thereof, and Consumer Products Containing the Same

ATI Technologies ULC, et al. v. VIZIO, MediaTek Inc., Sigma Designs, Inc., et al.

U.S. International Trade Commission

Investigation No. 337-TA-1044

Patent Infringement

10. Certain Magnetic Tape Cartridges and Components Thereof

Sony Corporation, et al. v. Fujifilm Corporation, et al.

U.S. International Trade Commission

Investigation No. 337-TA-1036

Patent Infringement

11. Huawei Technologies Co. Ltd. v. T-Mobile US, Inc. and T-Mobile USA, Inc.

U.S. District Court - Eastern District of Texas, Marshall Division

Case Nos. 2:16-cv-00052-JRG-RSP, 2:16-cv-00055-JRG-RSP,

2:16-cv-00056-JRG-RSP, and 2:16-cv-00057-JRG-RSP

Patent Infringement

12. Amneal Pharmaceuticals, LLC v. Purdue Pharma L.P., et al.

The United States Patent and Trademark Office, Patent Trial and Appeal Board Case Nos. IPR2016-01027 and IPR2016-01028

Patent Review

13. Certain Audio Processing Hardware, Software, and Products Containing the Same Andrea Electronics Corporation v. Apple Inc., Samsung Electronics Co., Ltd. et al.

U.S. International Trade Commission

Investigation No. 337-TA-1026

Patent Infringement

14. Certain Sleep-Disordered Breathing Treatment Mask Systems

ResMed Corp.; ResMed Inc.; et al. v. Fisher & Paykel Healthcare, Inc. et al.

U.S. International Trade Commission

Investigation No. 337-TA-1022

Patent Infringement

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15. Certain Memory Modules and Components Thereof Netlist Inc. v. SK hynix Inc., SK hynix America, Inc. et al. U.S. International Trade Commission Investigation No. 337-TA-1023 Patent Infringement

16. Audio MPEG, Inc. et al. v. Dell, Inc. U.S. District Court – District of Virginia Case No. 2:15-cv-73 (HCM/RJK) Patent Infringement

17. Certain Mobile Electronic Devices Incorporating Haptics Immersion Corporation v. Apple Inc. and AT&T Mobility LLC U.S. International Trade Commission Investigation No. 337-TA-1004/990 Patent Infringement

 Nokia Technologies LTD v. LG Electronics Inc. ICC International Court of Arbitration ICC Case No. 22326/EMT/GR

 Certain Magnetic Data Storage Tapes and Cartridges Containing the Same Fujifilm Corporation, et al v. Sony Corporation, et al. U.S. International Trade Commission Investigation No. 337-TA-1012 Patent Infringement

20. Certain Silicon-On-Insulator Wafers Silicon Genesis Corporation v. Soitec S.A. U.S. International Trade Commission Investigation No. 337-TA-1025 Patent Infringement

21. Certain Sleep-Disordered Breathing Treatment Systems and Components Thereof ResMed Corp.; ResMed Inc.; and ResMed Ltd. v. BMC Medical Co., Ltd. et al. U.S. International Trade Commission Investigation No. 337-TA-997 Patent Infringement

22. Certain Automated Teller Machines, ATM Modules, Components Thereof, and Products Containing the Same

Nautilus Hyosung, Inc., et al. v. Diebold, Incorporated, et al. U.S. International Trade Commission

Investigation No. 337-TA-989

Patent Infringement

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23. Core Wireless Licensing S.A.R.L. v. LG Electronics, Inc. and LG Electronics Mobilecomm U.S.A., Inc.

U.S. District Court – Eastern District of Texas, Marshall Division Case No. 2:14-cv-912-JRG-RSP Patent Infringement

24. Certain RF Capable Integrated Circuits and Products Containing the Same ParkerVision, Inc. v. Qualcomm Incorporated; Apple Inc.; LG Electronics, Inc.; Samsung Electronics Co., Ltd.; et al.

U.S. International Trade Commission Investigation No. 337-TA-982 Patent Infringement

25. Certain Automated Teller Machines, ATM Modules, Components Thereof, and Products Containing Same

Diebold, Incorporated, et al. v. Nautilus Hyosung, Inc., et al.

U.S. International Trade Commission Investigation No. 337-TA-972 Patent Infringement

26. Certain Wearable Activity Tracking Devices, Systems, and Components Thereof Fitbit, Inc. v. AliphCom, Inc. d/b/a/ Jawbone and BodyMedia, Inc.

U.S. International Trade Commission Investigation No. 337-TA-973 Patent Infringement

27. Oracle USA, Inc. et al. v. Rimini Street, Inc. and Seth Ravin U.S. District Court – District of Nevada Case No. 2:10-cv-0106-LRH-PAL Copyright Infringement

28. Core Wireless Licensing S.A.R.L. v. LG Electronics, Inc. and LG Electronics Mobilecomm U.S.A., Inc.

U.S. District Court – Eastern District of Texas, Marshall Division Case No. 2:14-cv-911-JRG-RSP Patent Infringement

29. Certain Variable Valve Actuation Devices and Automobiles Containing the Same Jacobs Vehicle Systems, Inc. v. Fiat Chrysler Automobiles N.V.; FCA US LLC, et al. U.S. International Trade Commission Investigation No. 337-TA-954 Patent Infringement

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30. Zimmer, Inc. v. Stryker Corporation; Howmedica Osteonics Corp.; et al.
U.S. District Court – Northern District of Indiana
Case No. 3:14-cv-00152-JD-CAN
Breach of Contract, Breach of Fiduciary Duty, Unfair Competition, Tortious Interference

31. Certain Electronic Devices, Including Wireless Communication Devices, Computers, Tablet Computers, Digital Media Players, and Cameras Ericsson Inc. and Telefonaktiebolaget LM Ericsson v. Apple Inc. U.S. International Trade Commission Investigation No. 337-TA-952 Patent Infringement

32. Certain Lithium Metal Oxide Cathode Materials, Lithium-Ion Batteries for Power Tool Products Containing Same, and Power Tool Products with Lithium-Ion Batteries Containing Same

BASF Corporation and UChicago Argonne, LLC v. **Umicore S.A.; Umicore USA, Inc.**; et al.

U.S. International Trade Commission Investigation No. 337-TA-951 Patent Infringement

33. Certain Network Devices, Related Software and Components Thereof (II) Cisco Systems, Inc. v. Arista Networks, Inc. U.S. International Trade Commission Investigation No. 337-TA-945 Patent Infringement

34. Certain Light-Emitting Diode Products and Components Thereof
Cree, Inc. v. Feit Electric Co. Inc.; Unity Opto Technology, Co. Ltd.; et al.
U.S. International Trade Commission
Investigation No. 337-TA-947
Patent Infringement, False Advertising

35. Certain Three-Dimensional Cinema Systems and Components Thereof RealD, Inc. v. Masterlmage 3D, Inc. and Masterlmage 3D Asia, LLC U.S. International Trade Commission Investigation No. 337-TA-939 Patent Infringement

36. Certain Network Devices, Related Software and Components Thereof (I) Cisco Systems, Inc. v. Arista Networks, Inc. U.S. International Trade Commission Investigation No. 337-TA-944 Patent Infringement

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37. LG Chem, LTD. v. Celgard, LLC

The United States Patent and Trademark Office, Patent Trial and Appeal Board Case No. IPR2014-00692

Patent Review

38. Pfizer Inc. and UCB Pharma GMBH v. Alkem Pharmaceuticals, Inc. et al.

U.S. District Court - District of Delaware

Case No. 1:13-cv-01110-GMS

Patent Infringement

39. Certain Consumer Electronics and Display Devices with Graphics Processing and Graphics Processing Units Therein

NVIDIA Corporation v. Qualcomm Inc.; Samsung Electronics Co., Ltd.; et al.

U.S. International Trade Commission

Investigation No. 337-TA-932

Patent Infringement

40. **Heckler & Koch, Inc., Heckler & Koch GmbH, et al.** v. German Sport Guns GmbH and American Tactical Imports, Inc.

U.S. District Court - Southern District of Indiana

Case No. 1:11-CV-1108 SEB-TAB

Breach of Contract, Tortious Interference

41. Certain Television Sets, Television Receivers, Television Tuners, and Components Thereof

Cresta Technology Corporation v. Silicon Laboratories Inc.; MaxLinear, Inc.; et al.

U.S. International Trade Commission

Investigation No. 337-TA-910

Patent Infringement

42. Certain Non-Volatile Memory Devices and Products Containing Same

Macronix International Co., Ltd. et al. v. Spansion, Inc. et al.

U.S. International Trade Commission

Investigation No. 337-TA-909

Patent Infringement

43. Certain Soft-Edged Trampolines and Components Thereof

Springfree Trampoline, Inc. et al. v. Vuly Trampolines Pty. Ltd.

U.S. International Trade Commission

Investigation No. 337-TA-908

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44. Certain Optical Disc Drives, Components Thereof and Products Containing Same Optical Devices, LLC v. Lenovo Group Ltd.; LG Electronics, Inc.; et al. U.S. International Trade Commission Investigation No. 337-TA-897 Patent Infringement

45. Certain Sleep-Disordered Breathing Treatment Systems and Components Thereof ResMed Corp.; ResMed Inc.; and ResMed Ltd. v. BMC Medical Co., Ltd. et al. U.S. International Trade Commission Investigation No. 337-TA-890 Patent Infringement

46. United Therapeutics Corporation v. Sandoz, Inc. U.S. District Court – District of New Jersey Civil Action No. 12-1617 Patent Infringement

47. Certain Microelectromechanical Systems ("MEMS Devices") and Products Containing the Same

STMicroelectronics, Inc. v. InvenSense, Inc.; Roku, Inc.; and Black & Decker, Inc. U.S. International Trade Commission Investigation No. 337-TA-876 Patent Infringement

48. Certain Wireless Communications Equipment and Articles Therein Samsung Electronics Co. Ltd., et al. v. Ericsson Inc. et al. U.S. International Trade Commission Investigation No. 337-TA-866 Patent Infringement

49. Certain Wireless Devices with 3G and/or 4G Capabilities and Components Thereof InterDigital Communications, Inc. et al. v. Huawei Technologies Co., Ltd., et al. U.S. International Trade Commission Investigation No. 337-TA-868 Patent Infringement

50. Certain Electronic Devices, Including Wireless Communication Devices, Tablet Computers, Media Players, and Televisions, and Components Thereof Ericsson Inc. et al. v. Samsung Electronics Co. Ltd., et al. U.S. International Trade Commission Investigation No. 337-TA-862 Patent Infringement

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- 51. Reduced Folate Nutraceutical Products and L-methylfolate Raw Ingredients Merck & Cie, Pamlab, LLC, et al. v. Macoven Pharmaceuticals, Inc. et al. U.S. International Trade Commission Investigation No. 337-TA-857 Patent Infringement
- 52. Certain Wireless Consumer Electronics Devices and Components Thereof Technology Properties Limited LLC et al. v. Acer Inc.; Amazon.com; et al. U.S. International Trade Commission Investigation No. 337-TA-853 Patent Infringement
- 53. Certain Audiovisual Components and Products Containing the Same LSI Corporation and Agere Systems, Inc. v. Funai Electric Co., Ltd., et al. U.S. International Trade Commission Investigation No. 337-TA-837 Patent Infringement
- 54. Certain Electronic Imaging Devices FlashPoint Technology, Inc. v. ZTE Corporation, et al. U.S International Trade Commission Investigation No. 337-TA-850 Patent Infringement
- 55. Certain Consumer Electronics and Display Devices and Products Containing Same Graphics Properties Holdings, Inc. v. Research in Motion Corp. et al. U.S International Trade Commission Investigation No. 337-TA-836 Patent Infringement
- 56. Certain Food Waste Disposers and Components and Packaging Thereof Emerson Electric Co. v. Anaheim Manufacturing Co. et al. U.S. International Trade Commission Investigation No. 337-TA-838 Patent Infringement, Trade Dress Infringement
- 57. Certain Electronic Digital Media Devices and Components Thereof Apple, Inc. v. Samsung Electronics Co., Ltd. et al. U.S. International Trade Commission Investigation No. 337-TA-796 Patent Infringement

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- 58. **Del Monte International GmbH** v. Del Monte Philippines, Inc. and GTL Limited American Arbitration Association

 Breach of Contract
- 59. Galderma Laboratories, L.P. et al. v. Tolmar, Inc. and Actavis Mid Atlantic LLC U.S. District Court – District of Delaware C.A. No. 10-cv-45 (LPS) Patent Infringement
- 60. Certain Semiconductor Chips and Products Containing Same Rambus, Inc. v. Freescale Semiconductor, Inc. et al. U.S. International Trade Commission Investigation No. 337-TA-753 Patent Infringement
- 61. Certain Printing and Imaging Devices and Components Thereof Ricoh Company, Ltd. et al. v. Oki Data Corporation et al. U.S. International Trade Commission Investigation No. 337-TA-690 Patent Infringement
- 62. MEMS Devices and Products Containing the Same
 Analog Devices, Inc. v. **Knowles Electronics LLC**, et al.
 U.S. International Trade Commission
 Investigation No. 337-TA-700
 Patent Infringement
- 63. **Software Tree, LLC** v. Red Hat, Inc., et al. U.S. District Court Eastern District of Texas 6:09-cv-00097-LED Patent Infringement
- 64. Certain MLC Flash Memory Devices and Products Containing Same BTG International Inc. v. Samsung Electronics Co., Ltd. et al. U.S. International Trade Commission Investigation No. 337-TA-683 Patent Infringement
- 65. Certain Silicon Microphone Packages, and Products Containing The Same Knowles Electronics, LLC v. Analog Devices, Inc. U.S. International Trade Commission Investigation No. 337-TA-695 Patent Infringement

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66. Certain Automotive Multimedia Display and Navigation Systems, Components Thereof, and Products Containing Same

Honeywell International, Inc. v. Alpine Electronics, Inc.; Pioneer Corporation

U.S. International Trade Commission

Investigation No. 337-TA-657

Patent Infringement

67. O'Gara—Hess & Eisenhardt Armoring Company LLC v. Ibis Tek, LLC et al.

Common Pleas Court of Butler County, Ohio

CV 2006 04 1157

Misappropriation of Confidential and Trade Secret Information

68. Multimatic, Inc. v. Faurecia Interior Systems USA, Inc.

U.S. District Court – Eastern District of Michigan

05-60120

Breach of Contract

69. Eaton Corporation v. ZF Meritor LLC, et al.

U.S. District Court – Eastern District of Michigan

03-74844

Patent Infringement

70. Certain Automated Mechanical Transmission Systems for Medium-Duty and Heavy-Duty Trucks, and Components Thereof

Eaton Corporation v. ZF Meritor LLC, et al.

U.S. International Trade Commission

Investigation No. 337-TA-503

Patent infringement

71. Certain Shirts with Pucker Free Seams and Methods of Producing Same

TALTECH Limited, et al. v. Esquel Apparel, Inc. et al.

U.S. International Trade Commission

Investigation No. 337-TA-517

Patent infringement

72. Certain Universal Transmitters for Garage Door Openers

The Chamberlain Group, Inc. v. Skylink Technologies, Inc. et al.

U.S. International Trade Commission

Investigation No. 337-TA-497

Patent Infringement, Digital Millennium Copyright Act

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1. "Forum: Valuation and damages in IP disputes," Financier Worldwide, January 2017.

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- 2. Speaker, *The Uncertain Future of At-Risk Launches: A Study of Injunctive Relief, Damages and the Impact of Protonix,* American Conference Institute's Second Annual Paragraph VI Disputes Master Symposium, Chicago, IL. October 1, 2014.
- 3. Speaker, Valuation of Innovation Product and Intellectual Property Based Assets, Institute of Food Technologists Pre-Annual Meeting Short Course: Commercializing Innovation in Food Products, New Orleans, LA. June 21, 2014.
- 4. Speaker, Valuation of Innovation Product and Intellectual Property Based Assets, Institute of Food Technologists Annual Meeting: Food Expo Forum, Chicago, IL. July 16, 2013.
- 5. Speaker, *Uniloc USA, Inc. v. Microsoft Corp.: The End of the 25% Rule,* Licensing Executives Society Aerospace and Transportation Committee Webinar, August 1, 2012.
- 6. "Can We 'Spot' Price-Fixing from Price Patterns?" The *Economics Committee Newsletter*, American Bar Association Section of Antitrust Law, Vol. 12, No. 1, pages 3-6 (Summer 2012).
- 7. Speaker, Valuation of Innovation Product and Intellectual Property Based Assets, Institute of Food Technologists Pre-Annual Meeting Short Course: Commercializing Innovation in Food Products, Las Vegas, NV. June 25, 2012.
- 8. Guest Lecturer, Patent Litigation, Chicago-Kent College of Law. March 6, 2012.
- 9. Panel Speaker, *Damages*, 12th Annual Silicon Valley Advanced Patent Law Institute, Palo Alto, CA. December 9, 2011.
- 10. Speaker, *Technical Session: Intellectual Property Perspective, Patents & Valuation,* Chicago Section Institute of Food Technologists, River Forest, IL. June 22, 2011.
- 11. Guest Lecturer, IP Litigation, John Marshall Law School. March 2, 2011.
- 12. Speaker, *Recent Developments at the U.S. International Trade Commission*, AIPPI-US Annual Meeting and International IP Forum, Chicago, IL. November 8, 2010.
- 13. Instructor, *Intellectual Asset Management: Valuation*, Licensing Executives Society Professional Development Series: Intermediate, Chicago, IL. July 14, 2010.
- 14. Instructor, *Intellectual Asset Management: Valuation*, Licensing Executives Society Professional Development Series: Intermediate, Toronto, ON. July 16, 2008.
- 15. Instructor, *Intellectual Asset Management: Valuation*, Licensing Executives Society Professional Development Series: Intermediate, San Francisco, CA. March 5, 2008.

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- 16. Panel Speaker, *Potential Impact of the Proposed Legislative Changes to Infringement Remedies and Patent Practice*, Los Angeles Intellectual Property Law Association: Washington in the West Conference, Los Angeles, CA. January 30, 2008.
- 17. Instructor, *Valuation of Intellectual Property*, Practicing Law Institute: Annual Patent Law Institute, San Francisco, CA. January 29, 2008.
- 18. Instructor, *Advanced Valuation Skills*, Licensing Executives Society Professional Development Series: Intellectual Asset Management Advanced Series, Philadelphia, PA. June 13-14, 2007.
- 19. Instructor, *Advanced Valuation Skills*, Licensing Executives Society Professional Development Series: Intellectual Asset Management Advanced Series, San Francisco, CA. November 1-2, 2006.
- 20. Guest Lecturer, *Financial Issues for Engineers*, Master of Engineering Management Program, Northwestern University. March 2006.
- 21. "AFDC and Births to Unwed Women." With Kurt C. Schaefer and Sarah E. Hamersma. *Labour Economics*. 9, pages 801-813 (2002).
- 22. "Optimal Contracts for Teams: A Note on the Results of McAfee and McMillan." *International Economic Review.* 36(4), pages 1051-6 (November 1995).

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TABS 2 through 13 Filed Under Seal